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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/620,825

07/16/2003

Kevin J. Youngers

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HEWLETT-PACKARD COMPANY

Intellectual Property Administration

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EXAMINER

NINO, ADOLFO

ART UNIT

PAPER NUMBER

2831

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

10/620,825

Applicant(s)

YOUNGERS ET AL.

Examiner

Adolfo Nino

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/16/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 7/16/03 is being considered by the examiner.

Claim Objections

Claim 20 is objected to because of the following informalities:

Claim 20, line 3, Examiner believes that "nonlinearly forming" should be --- stiffening---. Note that this is how the Examiner interpreted the claim; hence, in claim 21, line 1, ""the means for stiffening" makes sense and no 112, 2nd rejection (lack of antecedent basis) was made for claim 21.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7-15, 17-21 and 23-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Lyon (US 2,959,634).

Regarding claim 1, Lyon discloses a flexibly-stiffened electrical cable (12), comprising: a flexible cable (12) adapted to transmit electrical signals along a longitudinal direction, the cable (12) nonlinearly formed in a lateral direction (fig. 2).

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Note that it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re. Hutchison*, 69 USPQ 138.

Regarding claim 2, Lyon discloses the electrical cable (12) of Claim 1, wherein the cable (12) comprises a ribbon cable (fig. 2).

Regarding claim 3, Lyon discloses the electrical cable (12) of Claim 1, further comprising at least one nonlinear stiffening support member (14) laterally secured to the cable (fig. 2).

Regarding claim 4, Lyon discloses the electrical cable (12) of Claim 1, further comprising a nonlinear stiffening support member (20a, 20b) coupled to each side of the cable (fig. 2).

Regarding claim 5, Lyon discloses the electrical cable (12) of Claim 1, wherein the cable (12) is disposed in at least one of a scanner, a copy machine, and a printer (col. 1, lines 35-42).

Regarding claim 7, Lyon discloses the electrical cable (12) of Claim 1, further comprising a nonlinear stiffening support member (14) adhesively secured to the cable in the lateral direction (fig. 2).

Regarding claim 8, Lyon discloses the electrical cable (12) of Claim 1, wherein the cable (12) is molded having a nonlinear configuration in the lateral direction (fig. 2).

Regarding claim 9, Lyon discloses the electrical cable (12) of Claim 1, further comprising a nonlinear stiffening support member (14) coupled to the cable in the lateral direction, the stiffening support member (14) flexible in the longitudinal direction (fig. 3).

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Regarding claim 10, Lyon discloses the electrical cable (12) of Claim 1, further comprising a nonlinear stiffening support member (20a, 20b) coupled to opposite ends of the cable (fig. 3).

Regarding claim 11, Lyon discloses an imaging device (col. 1, lines 32-41), comprising: an image capturing device movable along a longitudinal direction (col. 1, lines 32-41); and a flexible cable (12) communicatively coupled to the image capturing device, the cable nonlinearly formed in a lateral direction (fig. 2).

Regarding claim 12, Lyon discloses the device of Claim 11, wherein the cable (12) comprises a ribbon cable (fig. 2).

Regarding claim 13, Lyon discloses the device of Claim 11, wherein the cable (12) comprises at least one nonlinear stiffening support member (14, 20a, 20b) laterally secured thereto.

Regarding claim 14, Lyon discloses the device of Claim 11, wherein the cable (12) comprises a plurality of oppositely disposed nonlinear stiffening support members (20a, 20b).

Regarding claim 15, Lyon discloses the device of Claim 11, wherein the imaging system comprises at least one of a scanner, a copy machine, and a printer (col. 1, lines 32-41).

Regarding claim 17, Lyon discloses the device of Claim 11, wherein the cable (12) comprises a nonlinear stiffening support member (14) adhesively secured thereto in the lateral direction (fig. 2).

Regarding claim 18, Lyon discloses the device of Claim 11, wherein the cable (12) is molded having a nonlinear configuration in the lateral direction (fig. 2).

Regarding claim 19, Lyon discloses the device of Claim 11, wherein the cable (12) comprises a nonlinear stiffening support member (14) laterally coupled thereto (fig. 2), the stiffening support member (14) flexible in the longitudinal direction (fig. 3).

Regarding claim 20, as best understood by the Examiner, Lyon discloses a linearly stiffened electrical cable (12), comprising: flexible means (12) for transmitting electrical signals along a longitudinal direction (col. 1, lines 32-41); and means for stiffening [nonlinearly forming] (14) the flexible means for transmitting the electrical signals in a lateral direction (fig. 2).

Regarding claim 21, Lyon discloses the cable (12) of Claim 20, wherein the means for stiffening (14) comprises at least one nonlinear stiffening support means (14) laterally secured to the flexible means for transmitting the electrical signals (fig. 2).

Regarding claim 23, Lyon discloses the cable (12) of Claim 20, wherein the means for stiffening (14) comprises a semirigid outer jacket (14) disposed about the flexible means for transmitting the electrical signals (fig. 2).

Regarding claim 24, Lyon discloses the cable (12) of Claim 20, wherein the means for stiffening (14) comprises a nonlinear stiffening support means (14) adhesively secured in the lateral direction to the flexible means for transmitting the electrical signals (fig. 2).

Regarding claim 25, Lyon discloses an imaging device (col. 1, lines 32-41), comprising an image capturing device; a flexible electrical conduit (12) coupled to the

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image capturing device, the conduit (12) adapted to accommodate movement of the image capturing device in a longitudinal direction; and a support member (14) disposed relative to the conduit (12) to prevent buckling of the conduit during the longitudinal movement of the image capturing device (fig. 2). **Note** that it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re. Hutchison*, 69 USPQ 138.

Regarding claim 26, Lyon discloses the imaging device of Claim 25, wherein the support member (14) comprises a nonlinearly formed support member (fig. 2).

Regarding claim 27, Lyon discloses the imaging device of Claim 25, wherein the support member (14) comprises a nonlinear configuration laterally disposed relative to the electrical conduit (fig. 2).

Regarding claim 28, Lyon discloses the imaging device of Claim 25, wherein the support member (14) is disposed corresponding to an internal bend radius of the electrical conduit (col. 2, lines 7-15).

Regarding claim 29, Lyon discloses the imaging device of Claim 25, wherein the support member (14) is disposed relative to the electrical conduit (12) to provide bend relief between the support member and the electrical conduit (col. 2, lines 26-47).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 6, 16 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyon (US 2,959,634). Lyon discloses the apparatus of claims 1, 11 and 20, respectively, **except for** further comprising a plurality of intermittently disposed nonlinear stiffening support members laterally coupled to the apparatus. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have formed the integral nonlinear stiffening support member laterally coupled to the apparatus into a plurality of intermittently disposed nonlinear stiffening support members laterally coupled to the apparatus, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

Conclusion

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hansen (US 4,092,997) discloses a constraint means for flexible elements with the flexible elements nonlinearly formed in a lateral direction. McKenney et al. (US 6,689,958 B1) disclose a flat ribbon cable. Grant et al. (US 6,501,020 B2) disclose a cable support assembly. Hayakawa et al. (US 5,446,240) disclose a flexible print cable. Otsuka et al. (US 5,096,316) disclose a serial printer. Uemori (US 4,897,442) discloses a wiring device. Suzuki (US 4,898,351) discloses a mechanism for supporting a long flexible element. Soulard (US 4,746,766) discloses a shielded flexing connector. Colglazier (US 3,576,941) discloses a flat cable. Dahlgren et al. (US 3,300,572) disclose an extensible flexible cable.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adolfo Nino whose telephone number is (571) 272-1981. The examiner can normally be reached on M-F (7:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean A Reichard can be reached on (571) 272-2800 ext. 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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CHAU N. NGUYEN
PRIMARY EXAMINER